DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second storage tank for storing the hydraulic oil from Claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided**. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should **avoid using phrases which can be implied**, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it recites legal phraseology and phrases that can be implied. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities: There are no section headings as required by the MPEP and listed below.

Appropriate correction is required.

6. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. **Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading.** If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A

COMPACT DISC.

(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 1 recites the limitation "the second heat exchanger" in line 6. There is insufficient antecedent basis for this limitation in the claim.

10. Regarding claim 9, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

11. Regarding claim 9, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-3, 5, 6, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Lech et al (US6354089B1, as cited by applicant).

Lech et al teaches:

Re Claim 1. Fluid cooling device as a structural unit (ref 10) having a drive motor (ref 21) (Column 2 lines 55-60) which drives a fan wheel (ref 72) (Column 4 line 23-25) and a fluid pump (ref 28) which delivers a first type of fluid (30) to a fluid working circuit (26a) and leads to a heat exchanger (ref 80) from which the fluid returns temperature-controlled to the fluid working circuit, characterized in that by means of a second fluid pump (ref 40) a second type of fluid (ref 36) can be taken from a storage tank (ref 58) and can be delivered to a second fluid working circuit (ref 34a) from which guided by way of the first (ref 80) and second (ref 78) heat exchanger the second type of fluid returns to the storage tank (Column 3 line 51 to Column 4 line 25, Column 4 line 48 to Column 5 line 13, Figures 2&3).

Re Claim 2. The fluid cooling device as claimed in claim 1, wherein the first heat exchanger is a plate heat exchanger (ref 80) which enables exchange of heat between the two types of fluid (Column 4 line 64-Column 5 line 7).

Re Claim 3. The fluid cooling device as claimed in claim 1, wherein the second heat exchanger (ref 78) is a finned radiator which acquires cooling air from the drivable fan wheel to cool the second type of fluid (Column 3 lines 55-61, Column 4 line 23-25, Figure 3 illustrates that the second heat exchanger has a fan).

Re Claim 5. The fluid cooling device as claimed in claim 1, wherein the storage tank (ref 58) is an integral component of the device (Figure 1 & 3 illustrates that the storage tank is integral to the device, Column 4 lines 48-63). It has been held that the term "integral" is sufficiently broad to embrace constructions united by such means as fastening and welding and is therefore not a limitation considered. In re Hotte, 177 USPQ 326, 328 (CCPA 1973)

Re Claim 6. The fluid cooling device as claimed in claim 1, wherein the second fluid pump (ref 40) is made as a submersible pump which is seated on the storage tank with its electric drive motor (Column 4 lines 59-63, Figure 3 shows that part of the pump is submersed into the reservoir tank in order to transport the fluid).

Re Claim 9. The fluid cooling device as claimed in claim 1, wherein the connectable first fluid working circuit (ref 26a) has a hydraulic assembly (ref 24) and the connectable second fluid working circuit (ref 34a) has at least one electric drive (ref 22) (Column 4 lines 48-64, Figures 2&3).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 4 & 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lech et al (US6354089B1, as cited by applicant) in view of Stenlund (US4878536).

Re Claim 4. Lech et al teaches the use of hydraulic fluids in the circuits but fails to specifically teach that the types of fluid consist of a hydraulic medium, the first type of fluid being a hydraulic oil and the second type of fluid being a water-glycol mixture. Stenlund teaches the use of fluid consists of a hydraulic medium, the first type of fluid being a hydraulic oil and the second type of fluid being a water-glycol mixture (Column 2 lines 16-23, Coulmn 5 lines 13-27). In view of Stenlund's teachings it would have been obvious to one of ordinary skill in the art at the time of invention to use hydraulic oil and a water-glycol mixture with Lech et al's heat exchanger since the oil and coolant are an art recognized equivalent to hydraulic fluids for the purpose of lubricating and cooling machinery. In addition, it is well known in the art to use hydraulic oils and water-glycol coolants in vehicular cooling systems.

Re Claim 7. Lech et al teaches a first storage tank (ref 58) and a second storage tank (ref 46) for the two different hydraulic fluids (Column 4 lines 48-64) but fails to specifically teach the use of hydraulic oil and water-glycol mixture. Stenlund teaches the use of fluid consists of a

hydraulic medium, the first type of fluid being a hydraulic oil and the second type of fluid being a water-glycol mixture (Column 2 lines 16-23, Coulmn 5 lines 13-27). In view of Stenlund's teachings it would have been obvious to one of ordinary skill in the art at the time of invention to use hydraulic oil and a water-glycol mixture with Lech et al's heat exchanger since the oil and coolant are an art recognized equivalent to hydraulic fluids for the purpose of lubricating and cooling machinery. In addition, it is well known in the art to use hydraulic oils and water-glycol coolants in vehicular cooling systems.

16. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lech et al (US6354089B1, as cited by applicant).

Re Claim 8. Lech et al teaches two fluid pumps but fails to specifically teach wherein the drive axes of the two fluid pumps run perpendicular to one another within the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the two pumps perpendicular to each other in order to achieve a more compact size of the fluid cooling device, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRAVIS RUBY whose telephone number is (571)270-5760. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules or Cheryl Tyler can be reached on 571-272-6681 or 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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